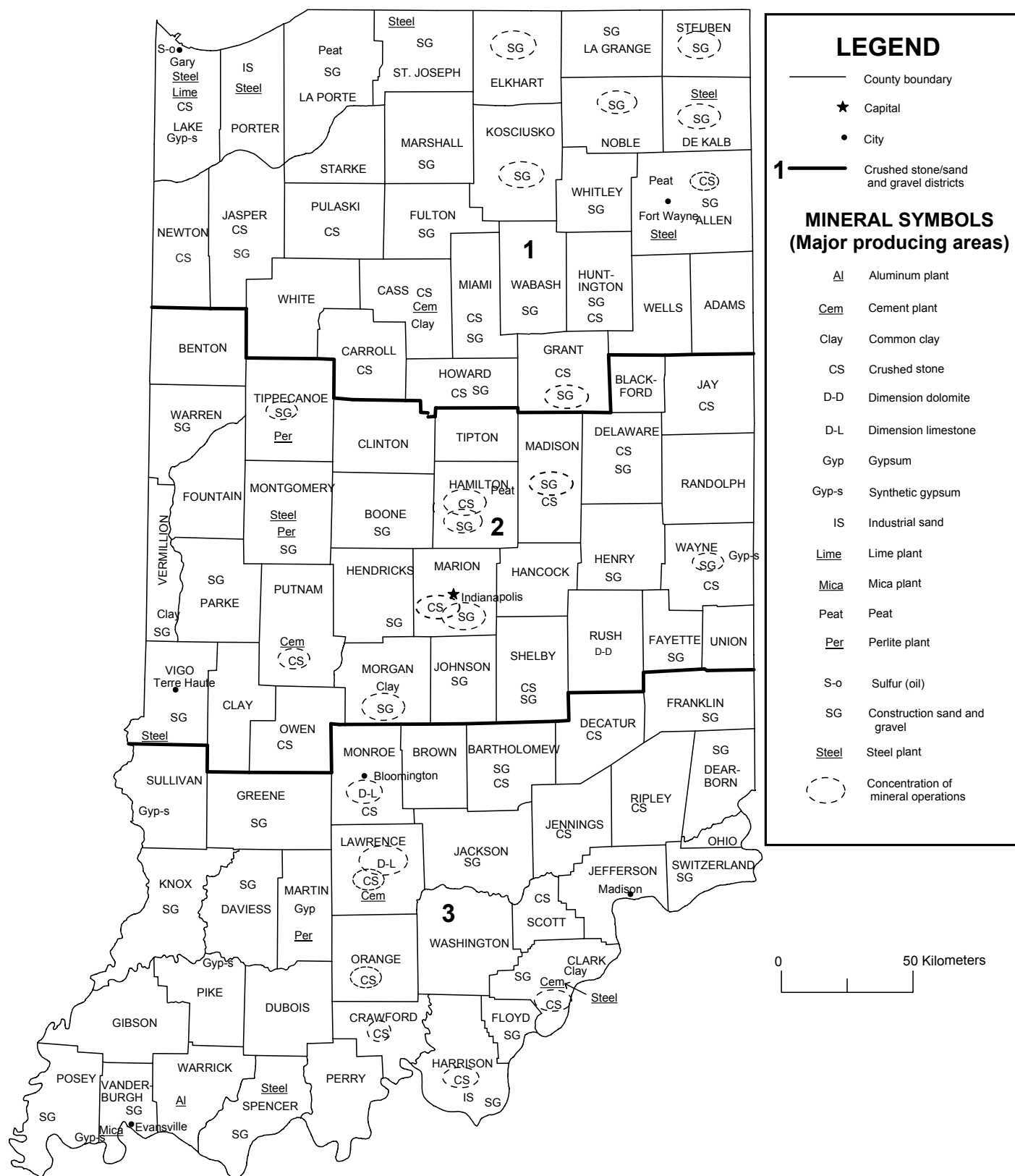


# INDIANA



**Source: Indiana Geological Survey/U.S. Geological Survey (2002)**

# THE MINERAL INDUSTRY OF INDIANA

**This chapter has been prepared under a Memorandum of Understanding between the U.S. Geological Survey and the Indiana Geological Survey for collecting information on all nonfuel minerals.**

In 2002, the estimated value<sup>1</sup> of nonfuel mineral production for Indiana was \$740 million, based upon preliminary U.S. Geological Survey (USGS) data. This was a marginal increase from that of 2001<sup>2</sup> and followed a 6.2% increase from 2000 to 2001. The State remained 18th in rank among the 50 States in total nonfuel raw mineral production value, of which Indiana accounted for nearly 2% of the U.S. total.

In 2002, increases in the estimated values of portland cement (up \$13 million) and gypsum (descending order of change) more than offset decreases in the values of construction sand and gravel (down \$4 million), dimension stone (down \$3 million), masonry cement, and lime, resulting in the small net increase for the year. Common clay, peat, and industrial sand and gravel values were also down slightly. In 2001, Indiana's rise in nonfuel mineral value resulted mostly from the rising values of crushed stone (up \$25 million), portland cement (up \$16 million), and construction sand and gravel (up \$3 million). Masonry cement was also up, slightly. The largest decreases were those of lime (down about \$4 million) and gypsum (down nearly \$2 million). Industrial sand and gravel and peat were also down slightly (table 1).

Compared with USGS estimates of the quantities of minerals produced in the other 49 States during 2002, Indiana remained first in dimension stone, fourth in masonry cement, eighth in portland cement, and ninth in lime. The State decreased to fifth from fourth in peat and to eighth from seventh in gypsum. Additionally, Indiana was a significant producer of crushed stone and construction sand and gravel, ranking 13th and 14th, respectively. The State's mines exclusively produced industrial minerals and coal; all raw steel and primary aluminum produced in the State were processed from materials received from other domestic and foreign sources. Indiana continued to lead the Nation in the production of raw steel, with an estimated output of about 20 million metric tons of raw steel, as reported by the American Iron and Steel Institute. Based upon USGS annual data, the State decreased to fourth from third in the production of primary aluminum.

The following narrative information was provided by the Indiana Geological Survey<sup>3</sup> (IGS).

## Employment

Preliminary data from the U.S. Mine Safety and Health Administration (MSHA) indicated that an average of 3,595 individuals were employed in the Indiana nonfuel minerals industry during 2002. This represented a 2.9% decrease from employment reported in 2001.

## Commodity Review

### *Industrial Minerals*

**Brick.**—A previously worked surface coal mine near Terre Haute may be developed into a 11,600-square-meter automated brick plant. Clay from the area would be used as feedstock in the \$15 million plant.

**Cement.**—Lehigh Portland Cement Co., headquartered in Allentown, PA, and with a plant in Mitchell, IN, changed its name to Lehigh Cement Co.

---

<sup>1</sup>The terms "nonfuel mineral production" and related "values" encompass variations in meaning, depending upon the minerals or mineral products. Production may be measured by mine shipments, mineral commodity sales, or marketable production (including consumption by producers) as is applicable to the individual mineral commodity.

All 2002 USGS mineral production data published in this chapter are preliminary estimates as of July 2003 and are expected to change. For some mineral commodities, such as construction sand and gravel, crushed stone, and portland cement, estimates are updated periodically. To obtain the most current information, please contact the appropriate USGS mineral commodity specialist. Specialist contact information may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals/contacts/comdir.html>; alternatively, specialists' names and telephone numbers may be obtained by calling USGS information at (703) 648-4000 or by calling the USGS Earth Science Information Center at 1-888-ASK-USGS (275-8747). All Mineral Industry Surveys—mineral commodity, State, and country—also may be retrieved over the Internet at URL <http://minerals.usgs.gov/minerals>.

<sup>2</sup>Values, percentage calculations, and rankings for 2001 may differ from the Minerals Yearbook, Area Reports: Domestic 2001, Volume II, owing to the revision of preliminary 2001 to final 2001 data. Data for 2002 are preliminary and are expected to change; related rankings may also change.

<sup>3</sup>Kathryn R. Shaffer, Minerals Statistician, authored the text of State mineral industry information provided by the Indiana Geological Survey.

**Crushed Stone.**—Rogers Group Inc., founded in 1908, received a Half Century Business Award from the Indiana Department of Commerce. To earn the award, a company must be in existence for at least 50 years and demonstrate that it historically has provided community service.

Important developments in the aggregates industry during 2002 included the opening of two new underground crushed stone mines. Rogers Group Inc. opened an underground mine near Bloomington in Monroe County, and Liter's Quarry of Indiana opened an underground mine at its Atkins crushed stone quarry near Jeffersonville in Clark County. Both companies have operated surface quarries at these locations. High-calcium limestone was produced at the Monroe County mine. About 27 hectares (ha) of land were added to the Rogers Group Newton County Quarry at Kentland. The quarry is within a meteorite impact site, which accounts for Ordovician age rocks having local exposure.

The Rogers Group took over the former Blackwell Moore plant that produces aggregate from overburden limestone at Indiana Limestone Co.'s Crown Quarry, a dimension limestone quarry in Monroe County. The operation was expected to produce about 363,000 metric tons (t) of crushed stone per year. Martin Marietta Aggregates still faced opposition to its planned expansion of its Indianapolis North operation on 96th Street in Indianapolis, Hamilton County, because property along 96th Street and northward is now prime residential property. No Indiana crushed stone quarries closed during 2002.

**Dimension Stone.**—Limestone Material Supply opened its new dimension limestone Luttrell & Galloway Quarry near Oolitic in Lawrence County. Star Stone Co., which stopped production at its Hunter Valley Quarry in Monroe County in 2000 when access was denied during prolonged highway construction, listed the quarry with MSHA as abandoned during 2002. The company has been producing at the Patton Hill Quarry in the Oolitic area, Lawrence County. Walton Quarries, which is now producing from a quarry southwest of Bloomington in Monroe County, listed its Oolitic Quarry in Lawrence County with MSHA as abandoned during 2002.

The Executive Director of the Indiana Limestone Institute was interviewed along with other industry experts for an article forecasting 2002 dimension stone consumption in the trade journal *Stone*. The Director reported an excellent year for Indiana limestone during 2001, with many contracts signed for 2002. The industry benefited in recent years from the large number of government projects and an increase in the construction of high-end residential homes. Renovation and restoration of older buildings has also enhanced demand for Indiana limestone (Stone, 2001).

A panel of Indiana limestone mined by the Independent Limestone Co. and milled by the Bybee Stone Co. was inscribed with a quote by President Bush: "Terrorist acts can shake the foundations of our biggest buildings but cannot touch the foundation of America." The panel was signed by employees of the mill and other local dignitaries and placed on display at the Pentagon construction site in Washington, DC, where it was also signed by construction workers. Bybee Stone Co. completed the Pentagon repair project in record time and began a new project to provide carved stone for the Kennedy-Warren Center in Washington, DC.

The Indiana Limestone Co. supplied dimension stone for the National Constitution Center in Philadelphia, PA, which is scheduled to open in 2003. About 77,100 t of the Indiana stone will be used on the facade of the building, and a portion of the preamble to the Constitution later will be carved onto it. The South Carolina Museum of Natural Science received an Award of Excellence in the third annual Project Awards Program of the Marble Institute of America. The exterior of the building and paving stone were largely composed of Indiana limestone from the Indiana Limestone Co.

A considerable amount of interest was generated in the Indiana dimension limestone industry when the Indiana Limestone Co. was offered for sale during 2002, but a buyer had yet to be announced by yearend.

A limestone memorial was constructed at the entrance to the town of Stinesville, Monroe County, to commemorate the importance of the area to the development of the dimension limestone industry in Indiana. Dimension limestone was first quarried near the village in 1827.

**Sand and Gravel.**—Six new sand and gravel stationary plants began operation in 2002. Brookfield Sand & Gravel opened the Darlington Plant in Montgomery County; Dennis Trucking Co. opened Plant No. 2 in Vigo County; Mid America Sand & Gravel Co. opened Perrysville Pit in Vermillion County; Prairie Material Sales opened Prairie Sand & Gravel Yard 72 in Morgan County; Stanley R. Stiers Enterprises opened Stanley Stiers Gravel in Madison County; and U.S. Aggregates opened Thorntown Plant No. 2 in Boone County. In addition, London Aggregates opened a portable plant in Steuben County. Purdy Materials, Plant No. 1, a sand and gravel company in Tippecanoe County, offered to purchase 74 ha of gravel-bearing land from Purdue University. Martin Marietta Aggregates also attempted to expand its Carmel Sand & Gravel operation north of 106th Street in Carmel, but the request was denied, and an appeal was filed. The company also filed a request in December to consider its long-term mining plan. New Carmel city laws were considered to further regulate mining in the city.

Fifteen sand and gravel pits closed during 2002. Significant among these included the Jerry R. Riddle Gravel Co., Riddle Sand and Gravel in Madison County; Martin Marietta Aggregates, Five Points Sand & Gravel in Morgan County; Nugent Sand Co., Utica Yard in Clark County; PMSI Sand & Gravel in Delaware County; and U.S. Aggregates, Richmond Plant in Wayne County.

The National Stone, Sand & Gravel Association's About Face Program recognized several mining operations that made outstanding beautification efforts during the year. Indiana companies that received awards include Sellersburg Stone Co. near Sellersburg, Clark County, which won a First Step Award. The following companies won Showplace Awards: Hanson Aggregates Midwest Region, Hayden Quarry, near Hayden in Jennings County; Liter's of Indiana, Atkins Quarry, near Jeffersonville in Clark County; Liter's of Indiana, Cooper Lane Quarry, near Sellersburg in Clark County; and Rogers Group, Morgan County Sand & Gravel, near Martinsville in Morgan County. The Indiana Mineral Aggregates Association presented an Excellence in Mining Gold Plant Award to the Atkins Quarry in 2002.

## **Metals**

**Steel.**—United States Steel Corp. began trading as an independent company at the beginning of the year. The company received International Organization for Standardization (ISO) 14001 environmental registration for all of its U.S. steel-producing facilities, the first integrated mill in the country to do so. The company will sell its coke, iron ore, and transportation businesses so that it can better concentrate on steel production. One coke plant in Gary will be affected. A 20% interest in the new company will be retained by U.S. Steel.

Bethlehem Steel Corp.'s Burns Harbor facility achieved ISO 14001 certification in 2001 and international certification for providing quality products to the automotive industry in 2002. An 8% interest in the iron ore mine in Minnesota that supplies that mill was sold.

Bethlehem Steel Corp. was delisted from the New York Stock Exchange in June because of its inability to maintain an average closing share price above \$1. The company continued to operate under Chapter 11 bankruptcy. A bill passed by Indiana authorized interest-free loans for Porter County in northwestern Indiana for up to 10 years because of problems caused by that bankruptcy filing. Near yearend, the International Steel Group (ISG) requested 60 days of exclusive rights to see if a merger could be worked out with the company. During 2002, ISG purchased the LTV Steel Corp., which had also been in Chapter 11 bankruptcy and reopened its plant at East Chicago.

The Butler flat-roll minimill of Steel Dynamics Inc. set a production record of 551,000 t during the third quarter. The company's new Columbia City structural steel and rail mill continued to ramp up production. Steel Dynamics also purchased the bankrupt Qualitech steel mill near Pittsboro in Hendricks County for \$45 million. Steel Dynamics planned to change the product line at the purchased mill and to spend from \$60 to \$70 million to prepare the mill for operation possibly by 2004. Nucor Corp. successfully opened its experimental Castrip micromill at Crawfordsville in Montgomery County, which produced 1.3-millimeter-thick steel through a combination of hot- and cold-rolling, a process not used by other mills. The process was developed by BHP Steel, an Australian mining company. Nucor and BHP Steel each own 47.5% of the facility, the remainder (5%) is owned by Ishikawajima-Harima Heavy Industries, which produces steelmaking equipment. Steel Technologies, which processed flat-rolled steel for the automotive industry and operated a plant at Portage, experienced record sales during its fiscal year ending September 30. The Indiana Department of Labor's Occupational Safety and Health Administration approved AK Steel's Rockport Works plant for participation in its STAR Voluntary Protection Program, which indicates that the plant has an excellent employee safety program that exceeds national standards. The Indiana Department of Environmental Management (IDEM) was drafting new environmental permits for the plant.

With improvement in the steel industry, steelmakers began negotiating price increases with the Nation's automakers, the first in 7 years.

## **Environmental Issues**

The IDEM received \$338,944 from the U.S. Environmental Protection Agency (EPA) to organize its internal data for entry into the EPA's National Environmental Information Exchange Network. Purdue University in West Lafayette, Tippecanoe County, was selected as one of eight new EPA Environmental Management Systems (EMS) to be known as EMS Local Resource Centers—regional centers to help local companies become more environmentally friendly.

The Environmental Quality Service Council was directed to study specific wetland issues. Rules affecting wetlands could not be passed until the study was completed. The Indiana Department of Natural Resources, Division of Water, was given enforcement power for violations under the division's jurisdiction, establishing that certain violations are infractions. The law also limits the dollar amount of civil penalties. Small changes were made to the regulation of National Pollutant Discharge Elimination System permits.

Lone Star Cement Co.'s Greencastle Plant won an award in the first annual Cement Industry Environmental Awards presented by a group of trade organizations for a plant expansion completed in 2000 that converted the plant to a semidry pyro-processing system. Purdue University will begin a new engineering program in cement technology in collaboration with the Portland Cement Association.

The 10th Governor's Conference on the Environment was held on September 27. The Governor's Awards for Environmental Excellence were presented to several government and company projects. One involved the Indiana Department of Transportation (INDOT), Southern Indiana Solid Waste Management Districts, and Purdue University for their use of crushed glass in road transportation construction projects.

U.S. Steel began its part of an effort to clean and restore a portion of the Grand Calumet River—one of the largest such projects of this kind in the Nation—and will donate 13 ha along the restored river to the U.S. National Park Service. National Steel Corp. will continue merger talks with U.S. Steel after filing under Chapter 11 of the Federal Bankruptcy Code. Bethlehem Steel Corp. became a charter member of the U.S. EPA's Climate Leaders Program, which sets high company standards to help control greenhouse gases.

## **Government Programs**

A draft of the environmental impact statement for the five routes proposed for the I-69 extension from Indianapolis to Evansville was released by the INDOT. No specific route was selected as final, but various routes were designated either as preferred or nonpreferred based on various criteria. The report can be viewed at URL <http://www.i69indyevn.org>. The announcement of a final route was expected by the end of 2002, but did not occur. Indiana and Kentucky announced their decision to build two bridges across the Ohio River. One is planned for the Jeffersonville, IN Louisville, KY, district and would carry six lanes of traffic. The other will be built east of that bridge to connect Indiana State Route 265 with the Snyder Freeway in Kentucky. The bridges are the largest Indiana-Kentucky cooperative highway project ever undertaken and will cost an estimated \$1.4 billion. Federal Highway Administration approval is expected. The Federal Highway Administration has awarded INDOT, Tippecanoe County, and Purdue University a \$475,000 discretionary award to build a bridge in Tippecanoe County using Fiber Reinforced Polymer (FRP). The FRP technology, which has been used in the aerospace and automotive industries, has recently been used elsewhere in the country to strengthen bridges.

Maintenance of the Indiana State highway system costs between \$450 and \$500 million annually. To help offset rising highway costs, the State increased the gasoline tax from 15 cents to 18 cents per gallon; this will result in an extra \$99 million annually for State highway construction projects. Counties will receive some of the money increase based on population and the number of miles of road in each county.

The IGS helped to train staff of the Indiana Mineral Aggregates Association in geographical positioning systems (GPS) and geographic information systems (GIS) to aid the organization's environmental stewardship program for pits and quarries in the State. Following the successful completion of the GIS Atlas for Southwestern Indiana, the IGS received a grant from INDOT to produce a digital atlas of geologic data for the entire State. The atlas consists of maps and data of interest to those in the mineral industries; it is available online at URL <http://igs.indiana.edu/arcims/index.html>.

USGS-funded STATEMAP projects continued at the IGS. Of interest to the mining industry, a CD-ROM version of a directory of industrial mineral producers in Indiana and two maps showing locations of karst features and cave openings in parts of Indiana were published by the IGS in 2002 (Powell, Frushour, and Harper, 2002a, b; Schaffer, 2002).

## **References Cited**

- Powell, R.L., Frushour, S.S., and Harder, D., 2002a, Areas of sinkholes and sinking-stream basins with locations of cave openings and springs in central southern Indiana: Indiana Geological Survey Miscellaneous Map 65, scale: 1:250,000.
- Powell, R.L., Frushour, S.S., and Harder, D., 2002b, Distributions of sinkholes, sinking-stream basins, and cave openings in southeastern Indiana: Indiana Geological Survey Miscellaneous Map 64, scale 1:250,000.
- Shaffer, K.R., 2002, Directory of industrial mineral producers in Indiana: Indiana Geological Survey Directory 11, CD-ROM.
- Stone, 2001, The U.S. stone industry forecast, 2002: *Stone*, v. 18, no. 1, January 15, p. 16-19.

TABLE 1  
NONFUEL RAW MINERAL PRODUCTION IN INDIANA<sup>1, 2</sup>

(Thousand metric tons and thousand dollars unless otherwise specified)

Mineral	2000		2001		2002 <sup>p</sup>	
	Quantity	Value	Quantity	Value	Quantity	Value
Cement, portland	2,630	179,000 <sup>e</sup>	2,900	195,000 <sup>e</sup>	3,090 <sup>e</sup>	208,000 <sup>e</sup>
Clays, common	639	1,560	575	1,470	373	775
Gemstones	NA	3	NA	3	NA	4
Sand and gravel, construction	27,900	121,000	29,000	124,000	27,600	120,000
Stone:						
Crushed	55,400	253,000	58,200	278,000	57,200	278,000
Dimension <span style="float: right;">metric tons</span>	235,000	32,400	184,000	35,300	209,000	32,400
Combined values of cement (masonry), gypsum (crude), lime, peat, sand and gravel (industrial), and values indicated by symbol W	XX	108,000	XX	104,000	XX	100,000
Total	XX	695,000	XX	738,000	XX	740,000

<sup>e</sup>Estimated. <sup>p</sup>Preliminary. NA Not available. XX Not applicable.

<sup>1</sup>Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

<sup>2</sup>Data are rounded to three significant digits; may not add to totals shown.

TABLE 2  
INDIANA: CRUSHED STONE SOLD OR USED, BY KIND<sup>1</sup>

Kind	2000				2001			
	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value	Number of quarries	Quantity (thousand metric tons)	Value (thousands)	Unit value
Limestone <sup>2</sup>	64	44,300 <sup>r</sup>	\$205,000	\$4.63	66	47,500	\$228,000	\$4.81
Dolomite	19	W	W	W	18	W	W	W
Slate	1	W	W	W	1	W	W	W
Total or average	XX	55,400	253,000	4.57	XX	58,200	278,000	4.77

<sup>r</sup>Revised. W Withheld to avoid disclosing company proprietary data; included in "Total." XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

<sup>2</sup>Includes limestone-dolomite reported with no distinction between the two.

TABLE 3  
INDIANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2001, BY USE<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Construction:			
Coarse aggregate (+1 1/2 inch):			
Macadam	76	\$468	\$6.16
Riprap and jetty stone	692	3,720	5.38
Filter stone	163	803	4.93
Other coarse aggregates	387	2,060	5.33
Total or average	1,320	7,060	5.35
Coarse aggregate, graded:			
Concrete aggregate, coarse	2,750	13,300	4.85
Bituminous aggregate, coarse	3,880	18,400	4.73
Bituminous surface-treatment aggregate	2,290	9,810	4.29
Railroad ballast	167	782	4.68
Other graded coarse aggregates	1,390	8,250	5.95
Total or average	10,500	50,600	4.83
Fine aggregate (-3/8 inch):			
Stone sand, concrete	W	W	5.68
Stone sand, bituminous mix or seal	234	1,380	5.91
Screening, undesignated	149	640	4.30
Other fine aggregates	332	2,260	6.80
Total or average	715	4,280	5.99
Coarse and fine aggregates:			
Graded road base or subbase	2,970	15,200	5.12
Unpaved road surfacing	933	4,510	4.84
Crusher run or fill or waste	129	622	4.82
Light weight aggregate (slate)	W	W	6.06
Other coarse and fine aggregates	4,640	20,100	4.35
Total or average	8,670	40,500	4.67
Other construction materials	32	239	7.47
Agricultural:			
Limestone	1,280	6,240	4.87
Poultry grit and mineral food	266	962	3.61
Other agricultural uses	144	508	3.53
Chemical and metallurgical:			
Cement manufacture	3,810	15,700	4.13
Flux stone	(2)	(2)	4.27
Sulfur oxide removal	1,610	6,000	3.72
Special, whiting or whiting substitute	(2)	(2)	11.74
Unspecified: <sup>3</sup>			
Reported	24,500	121,000	4.95
Estimated	5,400	25,000	4.52
Total or average	29,900	146,000	4.87
Grand total or average	58,200	278,000	4.77

W Withheld to avoid disclosing company proprietary data; included in "Other."

<sup>1</sup>Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

<sup>2</sup>Withheld to avoid disclosing company proprietary data; included in "Grand total."

<sup>3</sup>Reported and estimated production without a breakdown by end use.



TABLE 4  
INDIANA: CRUSHED STONE SOLD OR USED BY PRODUCERS IN 2001, BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Construction:						
Coarse aggregate (+1 1/2 inch) <sup>2</sup>	161	1,090	143	745	1,010	5,220
Coarse aggregate, graded <sup>3</sup>	W	W	W	W	W	W
Fine aggregate (-3/8 inch) <sup>4</sup>	239	1,380	W	W	W	W
Coarse and fine aggregates <sup>5</sup>	4,090	17,300	W	W	W	W
Other construction materials	--	--	32	239	--	--
Agricultural <sup>6</sup>	795	4,020	79	368	818	3,320
Chemical and metallurgical <sup>7</sup>	W	W	W	W	W	W
Special <sup>8</sup>	--	--	--	--	W	W
Unspecified: <sup>9</sup>						
Reported	5,960	29,400	14,200	71,700	4,300	20,100
Estimated	1,700	7,600	930	4,200	2,800	13,000
Total	15,000	70,800	19,000	95,900	24,300	111,000

W Withheld to avoid disclosing company proprietary data; included in "Total." -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes filter stone, macadam, riprap and jetty stone, and other coarse aggregates.

<sup>3</sup>Includes bituminous aggregate (coarse), bituminous surface-treatment aggregate, concrete aggregate (coarse), railroad ballast and other ballast, and other graded coarse aggregates.

<sup>4</sup>Includes stone sand (bituminous mix or seal), stone sand (concrete), screening (undesignated), and other fine aggregates.

<sup>5</sup>Includes crusher run or fill or waste, graded road base or subbase, lightweight aggregate (slate), unpaved road surfacing, and other coarse and fine aggregates.

<sup>6</sup>Includes agricultural limestone, poultry grit and mineral food, and other agricultural uses.

<sup>7</sup>Includes cement manufacture, flux stone, and sulfur oxide removal.

<sup>8</sup>Includes whiting or whiting substitute.

<sup>9</sup>Reported and estimated production without a breakdown by end use.

TABLE 5  
INDIANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2001, BY MAJOR USE CATEGORY<sup>1</sup>

Use	Quantity (thousand metric tons)	Value (thousands)	Unit value
Concrete aggregates (including concrete sand)	6,430	\$23,100	\$3.59
Plaster and gunitite sands	98	887	9.05
Concrete products (blocks, bricks, pipe, decorative, etc.)	432	2,340	5.41
Asphalt concrete aggregates and other bituminous mixtures	1,220	5,320	4.36
Road base and coverings <sup>2</sup>	854	3,840	4.49
Fill	2,320	9,350	4.02
Snow and ice control	297	1,080	3.62
Other miscellaneous uses	204	1,170	5.72
Filtration	3	27	9.00
Unspecified: <sup>3</sup>			
Reported	13,300	61,600	4.63
Estimated	3,800	15,000	3.98
Total or average	29,000	124,000	4.27

<sup>1</sup>Data are rounded to no more than three significant digits, except unit value; may not add to totals shown.

<sup>2</sup>Includes road and other stabilization (cement and lime.)

<sup>3</sup>Reported and estimated production without a breakdown by end use.

TABLE 6  
INDIANA: CONSTRUCTION SAND AND GRAVEL SOLD OR USED IN 2001, BY USE AND DISTRICT<sup>1</sup>

(Thousand metric tons and thousand dollars)

Use	District 1		District 2		District 3	
	Quantity	Value	Quantity	Value	Quantity	Value
Concrete aggregates (including concrete sand)	2,100	7,030	2,230	10,500	2,100	5,570
Concrete products (blocks, bricks, pipe, decorative, etc.) <sup>2</sup>	57	341	220	1,270	253	1,620
Asphaltic concrete aggregates and road base materials <sup>3</sup>	1,310	5,950	503	2,110	263	1,080
Fill	491	1,580	1,440	6,060	387	1,710
Other miscellaneous uses <sup>4</sup>	260	940	166	1,000	78	325
Unspecified: <sup>5</sup>						
Reported	1,150	4,840	10,000	49,600	2,170	7,160
Estimated	1,700	6,900	1,300	4,600	830	3,500
Total	7,050	27,500	15,800	75,100	6,090	21,000

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes plaster and gunite sands.

<sup>3</sup>Includes road and other stabilization (cement and lime).

<sup>4</sup>Includes filtration and snow and ice control.

<sup>5</sup>Reported and estimated production without a breakdown by end use.